IN THE SPECIFICATION:

Please amend the paragraph starting at page 2, line 15 and ending at page 3, line 11, as follows.

--Comparing the two driving methods, the method which employs a coupling is superior in terms of cost. Further, in the case of an image formation system constructed around a photoconductive drum, a photoconductive drum has come to be integrally disposed, along with a single or a plurality of processing apparatuses, such as a developing apparatus, in a cartridge (process cartridge). Consequently, it has become considered important how easy a process cartridge is to mount into, or dismount from, the image forming apparatus main assembly. This has called attention to various couplings, that is, devices for connecting two shafts to transmit a driving force from one shaft to the other. Among various couplings, couplings such as the one shown in Figure 14 which ~~comprises~~ comprise a combination of a female type coupler and a male type coupler, and in which driving force is transmitted through the engagement between the two couplers, ~~has~~ have begun to attract special attention because of ~~its~~ their superiority in terms of driving force transmission performance. The couplings such as the one shown in Figure 14 have come to be widely used, because of their advantage in driving force transmission performance.--

Please amend the paragraph starting at page 3, line 12 and ending at line 26, as follows.

--However, a coupling based driving method is inferior to a direct driving method in terms of driving force transmission accuracy; in other words, there is a concern that a coupling based driving method suffers from the problem regarding the angle at which two shafts are

connected to each other by a coupling, the problem regarding how two shafts are aligned with each other by a coupling, or the like problems. When an image forming apparatus suffers from the problems described above, an image becomes misaligned relative to a recording medium, degrading image quality. This problem is particularly conspicuous in an image forming apparatus which forms a color image on recording medium by placing a plurality of images different in color, in layers.--

Please amend the paragraph starting at page 4, line 16 and ending at page 5, line 20, as follows.

--On the other hand, the photoconductive drum 80, or a cylindrical member which constitutes one of the components of the system to be driven by the driving system I, is provided with a twisted projection 10, which is the same in twist angle as the twisted hole of the female type coupler 50, and the cross section of which is in the form of an equilateral triangle. A male type portion 53 with the projection 10 in the form of a twisted pillar with a cross section in the form of an equilateral triangle doubles as a drum flange 80. Although the projection 10 is in the form of an equilateral triangular pillar, here, it may be in the form of a polygonal pillar, the cross section of which is not in the form of an equilateral triangle. When one of the lateral walls of the hole of the female type portion is in contact with one of the lateral walls of the male type portion, the interface between the two members forms a twisted line 60. Therefore, as a rotational force is ~~applies~~ applied to the female type portion while the two members are in engagement with each other, the male type portion, that is, the member on the photoconductive drum 80 side is pulled into the female type portion, or the member on the apparatus main assembly side, being

accurately positioned relative to the apparatus main assembly. As a result, the two shafts are precisely connected by this effect, that the male type portion is pulled into the female type portion, and the play between the photoconductive drum 80 and apparatus main assembly in terms of the thrust and radial directions of the photoconductive drum 80 is eliminated.--

C3 cont

Please amend the paragraph starting at page 6, line 21 and ending at page 7, line 12, as follows.

--As described above, a coupling which comprises a combination of a female type portion and a male type portion, and in which the male type portion is engaged into, and then is placed in contact with, the female type portion, makes it possible to connect two shafts while automatically aligning the two shafts, accurately positioning them, and eliminating the play. Therefore, such a coupling is considered effective as a member for the connection between the photoconductive ~~rum~~ drum of an image formation unit in the form of a cartridge, and the image forming apparatus main assembly. Further, a coupling, in which the hole of the female type portion and the projection of the male type portion are in the form of a twisted polygonal pillar, provides the effect that a photoconductive drum is pulled toward the image forming apparatus main assembly in terms of their axial directions, in addition to the above described effects.--

C4

Please amend the paragraph starting at page 7, line 13 and ending at page 8, line 6, as follows.

--The above described coupling, however, suffers from the problem that as the driven system is subjected to a force other than the force transmitted from the driving system, the

C5

contact between the two systems is disturbed. For example, as a photoconductive drum comes into contact with an intermediary transfer member, the photoconductive member is subjected to such force that ~~applies~~ is applied to the photoconductive member in the circumferential direction of the photoconductive member, and this force disturbs the contact between the two members of the above described coupling. More specifically, two shafts to which the female and male type portions of the aforementioned coupling are attached one for one are kept aligned with each other by the contact between the two members of the coupling, and therefore, as the contact between the two members is disturbed, the two shafts become misaligned with each other, causing an image to be misaligned with the recording medium, as the image is formed. This has been a significant problem.--

C5 Cont

Please amend the paragraph starting at page 8, line 24 and ending at page 9, line 6, as follows.

--According to an aspect of the present invention, there is provided a drive transmission apparatus comprising a first coupling portion having a polygonal shape; a second coupling portion having a hole portion which has a cross-sectional configuration larger than [said] the first coupling portion, [said] the hole portion being engageable with [said] the first coupling portion; and a center shaft provided on [said] the first coupling or [said] the second coupling, [said] the center shaft penetrating the other one of [said] the first and second coupling.--

C6

Please amend the paragraph starting at page 9, line 7 and ending at page 10, line 2, as follows.

--According to another aspect of the present invention, there is provided an image forming apparatus comprising a photosensitive member; charging means for charging [said] the photosensitive member; image forming means for forming an electrostatic image on [said] the photosensitive and charged by [said] the charging means; developing means for developing the C7 electrostatic image; transferring means for transferring the image developed by [said] the developing means onto a recording material; a driving source; a driver for transmitting a driving force from [said] the driving source to [said] the photosensitive member; a first coupling portion having a polygonal shape; a second coupling portion having a hole portion which has a cross-sectional configuration larger than [said] the first coupling portion, [said] the hole portion being engageable with [said] the first coupling portion; and a center shaft provided on [said] the first coupling or [said] the second coupling, [said] the center shaft penetrating the other one of [said] the first and second coupling; wherein [said] the photosensitive member has one of [said] the first coupling portion and [said] the second coupling portion, and [said] the driver as the other coupling portion.--

Please amend the paragraph starting at page 10, line 3 and ending at line 13, as follows.

--According to a further aspect of the present invention, there is provided a process unit which is detachably mountable to an image forming apparatus having a driving portion, [said] C8 the process unit including process means actable on the photosensitive member, [said] the process unit comprising a first coupling portion having a polygonal shape and engageable with the driving portion of the main assembly of the apparatus; a hole portion engaged with a center shaft penetrating an engaging portion between [said] the first coupling portion and the driver.--

Please amend the paragraph starting at page 15, line 18 and ending at page 16, line 8, as follows.

--The driving system I comprises a motor 11, a driving gear 12, a gear shaft 13, and a second coupling portion 14, with which the apparatus main assembly is provided. As the driving gear 12 rotates by receiving a driving force from the motor 11 as a driving force source, the gear shaft 13 as an output shaft coaxial with the driving gear 12 rotates with the driving gear 12. The gear shaft 13 is put through a through hole 14a of the second coupling portion 14, doubling as the central shaft of the coupling. The portion L of the gear shaft 13, around which the second coupling portion 14 fits, and the through hole 14a of the second coupling portion 14, are both given a cross section in the form of D, that is, a shape formed by removing a segment of a substantial size from a disk, with the portion L fitted through the through hole 14a, so that the gear shaft 13 and second coupling portion 14 rotate together.--

Please amend the paragraph starting at page 19, line 10 and ending at page 21, line 4, as follows.

--The first coupling portion 10, or the projection on the driven system side, having a cross section in the form of an equilateral triangle, engages ~~into~~ the hole 50 on the driving system side having a cross section in the form of an equilateral triangle (which hereinafter will be referred to as "engagement of male type coupling portion into female type coupling portion"). The driving gear 12, the gear shaft 13, and the second coupling portion 14 are rotated together by the driving force from the motor 11. During the engagement of the first coupling portion into the hole 50, the extension portion 130 of the gear shaft 13 fits into the hole 10 of the drum flange 18

(which hereinafter will be referred to as "engagement of shaft into hole"). The second coupling portion 14 is attached so that the axial line of the hole 50 coincides with the rotational axis of the gear shaft 13, and the axial line of the through hole 19, into which the extension portion 130 of the gear shaft 13 is put, is made to coincide with the axial line of the first coupling portion 10 in the form of a projection having a cross section in the form of an equilateral triangle. The cross section of the twisted hole 50, and the cross section of the first coupling in the form of the pillar having a cross section in the form of an equilateral triangle are similar to each other, being in the form of an equilateral triangle. Therefore, as the second coupling portion 14 is rotated, it comes into contact, and remains in contact, with the first coupling portion 10 at three points (as shown in Figure 9 ~~(b)~~). As a result, the photoconductive drum 80 is pulled in by the apparatus main assembly side, being fixed in position relative to the apparatus main assembly, and at the same time, the hole 50, and the first coupling portion 10 in the form of a polygonal pillar, are automatically aligned so that their axial lines coincide with each other. During this process, the aligned axial lines of the hole 50 and the first coupling portion 14 in the form of a pillar having a cross section in the form of an equilateral triangle, coincide with the rotational axis of the gear shaft 13. Therefore, the engagement of the shaft into the hole does not interfere with the automatic axial line aligning function of the coupling. Using the gear shaft 13 as a coupling shaft by putting it through the second coupling portion 14 improves the accuracy with which the axial lines of the driving system and driven system are aligned with each other.--

Please amend the paragraph starting at page 21, line 5 and ending at page 22, line 18, as follows.

--The play between the flange 18 and the extension portion 130 of the gear shaft 13, that is, the play between the wall of the through hole 19 of the flange 18 and the peripheral surface of the extension portion 130 of the gear shaft 13, is made smaller than the play between the second coupling portion 14 and the first coupling portion 10, that is, the play between the wall of the hole 50 of the second coupling portion 14, and the lateral wall of the first coupling portion 10. As a result, the maximum amount of the play of the photoconductive drum in terms of its radius direction (which hereinafter will be referred to as "radial direction") is regulated by the amount of the play between the flange 18 and the extension portion 130 of the gear shaft 13, instead of the play between the second coupling portion 14 and the first coupling portion 10. Therefore, the displacement of the photosensitive drum 80 in the radial direction, which occurs as the photoconductive drum 80 is made to rotate faster than the normal speed, by ~~the~~ an external disturbance such as the contact by the intermediary transfer belt 82 or the like, can be virtually eliminated by minimizing the play between the flange 18 and the extension portion 130 of the gear shaft 13, within a range in which the reduction of the play between the flange 18 and the extension 130 of the gear shaft 13 does not interfere with the rotation of the photoconductive drum 80. In ~~,in~~ other words, the alignment accuracy between the axial line of the photoconductive drum 80 and the axial line of the driving shaft 13 can be maintained by minimizing the play between the flange 18 and the extension portion 130 of the gear shaft 13. Further, the play between the first and second coupling portions 14 and 10 in terms of their radial directions may be increased. Therefore, ease of the engagement of the first coupling portion 10 in the form of a polygonal pillar into the hole 50 can be improved by increasing the play between

C11 cont

the first and second coupling portions 14 and 10, to improve the cartridge in terms of operability ~~operativity~~.--

Please amend the paragraph starting at page 22, line 24 and ending at page 23, line 7, as follows.

C12

--Although the first coupling portion 10 in this embodiment is in the form of a simple polygonal pillar, a first coupling portion may be in the form of a twisted polygonal pillar, the twist angle of which is the same as that of the hole 50. In such a case, the contact, that is, interface, between the two coupling portions will be in the form of a twisted line, instead of a point, ~~being~~ having a greater ~~in the size of~~ contact size. Therefore, the force with which the photoconductive drum is pulled in, that is, the force which keeps the two shafts connected, is greater.--

Please amend the paragraph starting at page 23, line 8 and ending at line 16, as follows.

C13

--In this embodiment, the driving force transmission mechanism in accordance with the present invention was described as the driving force transmission mechanism for transmitting the driving force to the photoconductive drum of an image forming apparatus. However, it can be used as a driving force transmission mechanism for a rotational member other than the photoconductive member of an image forming apparatus.--

Please amend the paragraph starting at page 25, line 9 and ending at line 20, as follows.

--The second coupling portion 14 in this embodiment is provided with a hole 50 as is the second coupling portion 14 in the first embodiment. The hole 50 is polygonal in cross section, and is located at the end of the second coupling portion 14, on the photoconductive drum 80 side. Here, the driving gear 12, the gear shaft 13, and holes the 92 and 50 ~~of the connecting member 90~~, coincide in an axial line, and rotate together. The second coupling 14 is kept under the pressure generated by a spring 16, and is allowed to move in its axial direction, as is the second coupling 14 in the first embodiment.--

Please amend the paragraph starting at page 26, line 25 and ending at page 27, line 14, as follows.

--Also as in the first embodiment, with the provision of the above described structural arrangement, the displacement of the photoconductive drum 80 in the radial direction, which occurs as the photoconductive drum 80 is made to rotate faster than the normal speed, by ~~the~~ an external disturbance such as the contact by the intermediary transfer belt 82 or the like, is virtually eliminated. Thus, the alignment accuracy between the axial line of the photoconductive drum 80 and the axial line of the driving shaft 13 is maintained, minimizing the reduction of driving force transmission accuracy. Further, the end of the shaft 91 may be tapered (portion 98) so that the tapered portion 98 guides the shaft 91 to make it easier for the shaft 91 to slip into the hole 92, during the mounting of the process unit.--

Please amend the paragraph starting at page 27, line 15 and ending at line 23, as follows.

--Making the coupling shaft separated from the shaft on the driving side, as is the shaft 91 in this embodiment, makes it possible to use a substance superior in slidability and strength as the material for the coupling shaft. Further, it allows the coupling shaft to be switched, and therefore, the amount of the play in the shaft-hole engagement can be easily changed or adjusted by switching the coupling shaft.--

C16

Please amend the paragraph starting at page 28, line 17 and ending at page 29, line 22, as follows.

--As described above, in a driving force transmission mechanism, a process unit, and an image forming apparatus, which are in accordance with the present invention, a cylindrical member can be connected to, or disconnected from, a driving system through the engagement of the polygonal projection of a coupling portion into a polygonal hole of another coupling portion. The driving force from the driving system is transmitted through a plurality of interfaces, in the form of a point or a line, between the polygonal projection of a coupling portion, and the walls of the polygonal hole of another coupling portion, when the two coupling portions are engaged. Either the coupling portion with the polygonal projection or the coupling portion with the polygonal hole is provided with a shaft which ~~protrude~~ protrudes in the axial direction of the coupling, and the coupling portion which is not provided with the protruding shaft is provided with a hole into which the protruding shaft engages. Therefore, even if the contact between the first and second coupling portions is disturbed as the cylindrical member is made to rotate faster than the normal speed by an external force other than the force which the driven side receives from the driving side, the cylindrical member on the driven side remains stably supported.

C17

Further, the alignment accuracy between the driving and driven sides can be maintained regardless of the play between the female and male type coupling portions, that is, the first and second coupling portions, in terms of their radial direction. Therefore, it is possible to reduce color deviation to provide a high quality image.--

Please amend the paragraph starting at page 29, line 24 and ending at page 31, line 1, as follows.

--Next, referring to Figure 5, the third embodiment of the present invention will be described. A drum flange 18 is provided with a cylindrical elastic member 5 as a braking member, which is formed of rubber or the like. Referring to Figure 6, the details of the elastic member 5 will be described. The elastic member 5 is provided with a center hole 6, which is a through hole, into which the extension portion 130 of a gear shaft 13 is engaged. The gear shaft 13 also constitutes the central shaft of the coupling. The internal diameter of the hole 6 is smaller than that of the through hole 19 of the drum flange 18, which extends in the axial direction of the drum flange 18 inclusive of the first coupling portion 10, that is, a projection in the form of a polygonal pillar; the internal diameter of the hole 6 is such that when the extension portion 130 of the gear shaft 13 is in the through hole 19, there is no play between the drum flange 18 and the extension portion 130 of the gear shaft 13. With the provision of this structural arrangement, as the extension portion 130 of the gear shaft 13 is engaged into the hole 6 of the elastic member 5, it is constricted by the elastic member 5 because of the resiliency of the elastic member 5. Thus, when the photoconductive drum 80 is subjected to an external force, for example, the force generated by the friction from an intermediary transfer belt 82, the external

force is canceled by the friction between the extension portion 130 of the gear shaft 13 and the wall of the hole 6, and therefore, the state of the contact between the female and male type coupling portions remains normal.--

Please amend the paragraph starting at page 31, line 2 and ending at line 25, as follows.

--The amount of the friction between the extension portion 130 of the gear shaft 13 and the wall of the hole 6 is determined by two values: the value of the coefficient of the friction between the extension 130 of the gear shaft 13 and the elastic member 5, and the value of the resiliency of the elastic member 5. The two values are set so that the amount of the friction between the extension 130 of the gear shaft 13 and the wall of the hole 6 succumbs to the torque of the gear shaft 13 as an output shaft, but overcomes the external force (for example, the force generated by the friction between the photoconductive drum 80 and intermediary transfer belt 82) which acts upon the photoconductive drum 80. With such an arrangement, the friction, which functions as braking force, does not ~~becomes~~ become a hindrance to the normal coupling movement of the first coupling portion 10 in the form of a polygonal pillar into the hole 50 of the second coupling portion, which is polygonal in cross section, and also keeps the first and second coupling portions normally coupled. Therefore, while the photoconductive drum 80 is driven, the driving system remains always property aligned with the photoconductive drum 80.--

Please amend the paragraph starting at page 32, line 24 and ending at page 33, line 16, as follows.

--With the provision of the above-described structural arrangement, as the tapered portion 98 at the end of the extension portion 130 comes into contact with the tapered portion 4 of the hole 6 during the insertion of the extension portion 130 of the gear shaft 13 into the hole 6, the position of the elastic member 5 is automatically adjusted so that the extension 130 of the gear shaft 13 fits into the hole 6. In other words, the extension portion 130 of the gear shaft 13, through hole 19, and hole 6 of the elastic member 5, coincide in an axial line; and such problems as the misalignment between the driving side and driven side of the coupling are prevented. Further, the play between the elastic member 5 and the wall of the hole 7 with a cross section in the form of an elongated hole is such that the elastic member 5 is allowed to move only in ~~the~~ a direction parallel to the long axis of the cross section. Therefore, the elastic member 5 rotates with the drum flange 18, without any play in terms of its rotational direction.--

Please amend the paragraph starting at page 34, line 6 and ending at line 20, as follows.

--Although the first coupling portion in this embodiment is in the form of a simple polygonal pillar, a first coupling portion may be in the form of a twisted polygonal pillar, the twist angle of which is the same as that of the hole 50 with a polygonal cross section. Such a modification changes the state of the contact (interface) between the two coupling portions during driving force transmission, from a point to a twisted line. In other words, it increases the size of the interface between the two coupling portions, increasing the force generated by the contact between the two coupling portions in the direction to pull the photoconductive drum toward the apparatus main assembly, and therefore, ~~increasing~~ increases the force which keeps the two shafts properly connected.--

Please amend the paragraph starting at page 34, line 21 and ending at page 35, line 7, as follows.

--Further, in this embodiment, the first coupling portion 10 in the form of a polygonal pillar is disposed on the driven system side, and the hole 50 with a polygonal cross section is disposed on the driving system side. However, the present invention is also applicable to a C12 structural arrangement ~~reversal~~ that is reverse to the structural arrangement in this embodiment, that is, a structural arrangement in which the hole 50 with a polygonal cross section may be provided in the drum flange 18, while disposing the first coupling portion 10 in the form of a polygonal pillar on the driving system side. Such a modification can provide the same effects as those provided by the arrangement in this embodiment.--

Please amend the paragraph starting at page 35, line 21 and ending at page 36, line 1, as follows.

--In the above description of this embodiment, the embodiment was described with C13 reference to a driving force transmission mechanism for a photoconductive drum. However, this embodiment of the present invention can be used as a driving force transmission mechanism for transmitting a driving force to rotational members other than a photoconductive drum.--

Please amend the paragraph starting at page 37, line 1 and ending at line 26, as follows.

--The drum flange 18 inclusive of the first coupling portion 10 in the form of a polygonal pillar is provided with a through hole 19, which extends in the axial direction of the drum flange C14 18 inclusive of the first coupling portion 10, and through which a gear shaft 13 is put. The axial

line of the through hole 19 coincides with the axial line of the first coupling portion 10. The inward end of the drum flange 18 with respect to the photoconductive drum 80 is provided with a pair of elastic members 31, for example, springs, which are attached to the drum flange 18 in such a manner that as the extension portion 130 of the gear shaft 13 is put through the through hole 19, the resiliency of the elastic members 31 ~~cause~~ causes the elastic member 31 to press on the extension portion 130. The elastic member 31 is fixed to the drum flange 18 with the use of an unshown fixing means. With the provision of this structural arrangement, as a photoconductive drum 80 is subjected to an external force such as the force generated by the friction from an intermediary transfer belt 82, the external force is canceled by the friction between the extension portion 130 of the gear shaft 13 and the elastic members 31, and therefore, the female and male type coupling portions remain properly in contact with each other.--

Please amend the paragraph starting at page 37, line 27 and ending at page 38, line 15, as follows.

--The amount of the friction between the extension portion 130 of the gear shaft 13, which also functions as the center shaft for the coupling, is set so that the friction succumbs to the torque of the gear shaft 13 as the output shaft, but overcomes an external force (for example, the force generated by the friction caused by the intermediary transfer belt 82) which acts upon the photoconductive drum 80. With this setup, the friction provided as a braking force does not interfere with the normal engagement of the first coupling portion 10 in the form of a polygonal pillar into the hole 50 with a polygonal cross section, and keeps the female and male type

coupling portions properly in contact with each other. Thus, the photoconductive drum 80 is always driven by the driving system I in the normal state.--

Please amend the paragraph starting at page 40, line 6 and ending at line 21, as follows.

--In the above description of this embodiment, a member having a twisted hole with a polygonal cross section, and a projection in the form of a polygonal pillar, are used as the driving force transmitting side and driving force receiving side, respectively, of the driving force transmission mechanism. However, the driving force transmitting side and the driving force receiving side of a driving force transmission mechanism do not need to be in the form of those in this embodiment. The same effects as those provided by this embodiment can be obtained as long as a driving force transmission mechanism employs a combination of female and male type coupling portions as a means for engaging the driving system and driven system, and keeping them properly in contact with each other.--

Please amend the paragraph starting at page 40, line 23 and ending at page 41, line 4, as follows.

--Next, referring to Figure 8, the fifth embodiment of the present invention will be described. In this embodiment, a magnetic force is used as braking force. The driving system and driven system in this embodiment are virtually the same as those in the third embodiment. Therefore, their detailed description will be omitted, and only the portions different from those in the third embodiment will be described.--

Please amend the paragraph starting at page 41, line 5 and ending at line 18, as follows.

--Referring to Figure 8, a drum flange 18 has a cylindrical magnetized member 201, which is disposed within the hollow of the drum flange 18. The magnetized member 201 is provided with a through hole 202, the axial line of which ~~is coincidental~~ coincides with that of the magnetized member 201, and in which the extension portion 130 of a gear shaft 13 is fitted. The diameter of the hole 202 may be larger than the external diameter of the extension portion 130 of the gear shaft 13; more precisely, it may be large enough to provide a certain amount of play between the wall of the hole 202 and the extension portion 130 of the gear shaft 13. On the other hand, a gear shaft 13 is formed of magnetic substance.--

Please amend the paragraph starting at page 41, line 19 and ending at page 42, line 11, as follows.

--With the provision of the above described structural arrangement, the extension portion 130 of the gear shaft 13 is magnetized by the magnetized member 201, and therefore, the portion of the extension portion 130 of the gear shaft 13 facing the magnetized member 201 is magnetized to the polarity opposite to the polarity of the portion of the magnetized member 201 facing the extension portion 130 of the gear shaft 13. As a result, the magnetic force acting between the extension portion 130 of the gear shaft 13 and the wall of the hole 202 acts in a manner to brake the extension portion 130 of the gear shaft 13. Thus, as an external force, for example, the force generated by the friction from an intermediary transfer belt 82, acts upon a photoconductive drum 80 ~~21~~, the external force is canceled by the magnetic force acting between

the extension portion 130 of the gear shaft 13 and the wall of the hole 202, and therefore, the state of the contact between the female and male coupling portions is kept normal.--

Please amend the paragraph starting at page 42, line 12 and ending at line 18, as follows.

--Here, the magnetic force acting between the extension portion 130 of the gear shaft 13 is set within a range in which it succumbs to the torque of the gear shaft 13 as the output shaft, but overcomes the external force (for example, the force generated by the friction caused by the intermediary transfer belt 32) which acts upon the photoconductive drum 80 ~~21~~.--

Please amend the paragraph starting at page 42, line 19 and ending at page 43, line 1, as follows.

--With the provision of the above described structural arrangement, the magnetic force provided as braking force can keep the coupling portion with the hole 50 with a polygonal cross section, normally in contact with the first coupling portion 10 in the form of a polygonal pillar, without interfering with the normal engagement of the first coupling portion 10 into the hole 50. Therefore, the photoconductive drum ~~21~~ 80 is always driven by the driving system properly connected to the photoconductive drum 80 ~~21~~.--

Please amend the paragraph starting at page 43, line 17 and ending at page 44, line 1, as follows.

--The polygonal projection in this embodiment may be in the form of the twisted polygonal projection in the first embodiment, the twist angle of which is the same as that of the

hole 50 with a polygonal cross section. Regarding ~~on which~~ the side between the driving system and driven system the projection 10 in the form of a polygonal pillar and the hole 50 with a polygonal cross section, are disposed, they can be disposed on either side, one for one, as in the first embodiment. Even if their positions are reversed from those in this embodiment, the same effects as those provided by this embodiment will be obtained.--

Please amend the paragraph starting at page 44, line 9 and ending at line 19, as follows.

--In the above described ~~this~~ embodiment, the female type portion with a twisted hole with a polygonal cross section, and male type portion with a projection in the form of a polygonal pillar, are chosen as the two sides of the coupling of the driving force transmission mechanism. However, the same effects as those provided by this embodiment can be obtained as long as the coupling of a driving force transmission mechanism employs female and male type portions which can be engaged with, disengaged from, or kept in contact with, each other.--

Please amend the paragraph starting at page 44, line 21 and ending at page 45, line 3, as follows.

--Next, referring to Figure 9, the sixth embodiment of the present invention will be described. In this embodiment, the braking force acts only in one direction. The driving system I is the same in structure as that in the first embodiment, and therefore, its details will not be described here. Further, the driven system II is virtually the same as that in the third embodiment, and therefore, only the portions of the driven system II different from those in the third embodiment will be described.--

Please amend the paragraph starting at page 45, line 4 and ending at line 22, as follows.

--Referring to Figure 9, a drum flange 18 has a cylindrical member 302, which is within the hollow of the drum flange 18. The cylindrical member 302 has a three-layer structure, comprising an innermost member 302a, a one-way clutch 301, and an outermost member 302b, ~~listing~~ which have been listed from the central shaft side. The innermost member 302a is provided with a center hole 303, into which the extension portion 130 of a gear shaft 13 engages. The relationship between the diameter of the hole 303 and the external diameter of the extension portion 130 of the gear shaft 13 is such that it leaves no play between the wall of the hole 303 and the extension portion 130 of the gear shaft 13. The gear shaft 13 and innermost member 302a are enabled to rotate together. On the other hand, the outermost member ~~303b~~ 302b is provided with such a mechanism that prevents the rotation of the outermost member 302b ~~303b~~, while providing the outermost member ~~303b~~ 302b with directional play (Figure 6).--

Please amend the paragraph starting at page 45, line 23 and ending at page 46, line 15, as follows.

--With the provision of the above described structural arrangement, it becomes possible for the position of the cylindrical member 303 to be automatically adjusted as the extension portion 130 of the gear shaft 13 is inserted into the hole 303. Therefore, it is possible to prevent such a problem as the shaft to be driven becomes connected askew to the driving shaft. The one-way clutch ~~302~~ 301 regulates the rotational direction of the gear shaft 13 so that the gear shaft 13 is allowed to rotate in the driving direction (direction of an arrow mark E). In other words, control is executed so that the outermost member ~~303b~~ 302b rotates in the direction of an

arrow mark F relative to the innermost member ~~302~~ 302a which rotates with the gear shaft 13. That is, the direction in which the driven side is allowed to rotate is such that the innermost member ~~302~~ 302a and outermost member 302b are sheared from each other in the directions of the arrow marks E and F, respectively, as if the one-way clutch 301 is the shearing line.--

Please amend the paragraph starting at page 46, line 16 and ending at page 47, line 23, as follows.

--On the contrary, the direction in which the photoconductive drum 80 is made to rotate faster than the normal speed, by an external force, such as the force generated by the friction between the photoconductive drum 80 and the intermediary transfer belt 82, is the direction indicated by an arrow mark G. The outermost member 302b rotates with the drum flange 18. Therefore, as an external force acts on the photoconductive drum 80 in the direction to rotate the photoconductive drum 80 faster than the normal speed in the direction of the arrow mark G, the external force also acts upon the outermost member 302b in the direction of the arrow mark G. In this case, however, the portions which rotate in the directions indicated by the arrow marks E and G, respectively, are not sheared from each other, unlike the portions which rotate in the directions indicated by the arrow marks E and F, respectively. Therefore, as external force acts upon the photoconductive drum 80 in the direction to rotate the photoconductive drum 80 faster than the normal speed, the braking force is applied by the one-way clutch 301. In other words, the structural arrangement in this embodiment cancels only the external force which acts upon the photoconductive drum 80 (for example, the external force generated by the friction from the intermediary transfer belt 82), and does not interfere with the normal contact between the second

coupling portion with polygonal hole 50 and the first coupling portion 10 in the form of a polygonal pillar. Therefore, the female and male type portions of the coupling of the driving force transmission mechanism are kept normally in contact with each other. In other words, the photoconductive drum 80 is always driven by the driving system in the normal state of connection.--

Please amend the paragraph starting at page 49, line 19 and ending at line 27, as follows.

--Referring to Figure 10, the seventh embodiment of the present invention will be described. In this embodiment, the braking force is provided with the use of a powder brake. The driving system I and driven system II in this embodiment are the same in structure as those in the sixth embodiment. Therefore, their detailed structures will not be described here, except for the portions different from those in the sixth embodiment.--

Please amend the paragraph starting at page 50, line 1 and ending at line 24, as follows.

--Referring to Figure 10, a drum flange 18 has a cylindrical member 502, which is in the hollow of the drum flange 18. The cylindrical member 502 has a three-layer structure, comprising an innermost member 502a, a powder brake 501, and an outermost member 502b, ~~listing~~ which have been listed from the central shaft side. The innermost member 502a is provided with a center hole 503, into which the extension portion 130 of a gear shaft 13 engages. The relationship between the diameter of the hole 503 and the external diameter of the extension portion 130 of the gear shaft 13 is such that it leaves no play between the wall of the hole 503 and the extension portion 130 of the gear shaft 13. The gear shaft 13 and innermost member

502a are enabled to rotate together. Therefore, as external force, such as the force generated by the friction from an intermediary transfer belt 82, acts upon the photoconductive drum 80, the external force is canceled by the braking force applied by the powder brake 501 between the innermost and outermost members 502a and 502b, respectively. Therefore, the female and male type portions of the driving force transmission mechanism are kept normally in contact with each other.--

Please amend the paragraph starting at page 50, line 25 and ending at page 51, line 14, as follows.

--The braking force of the powder brake 501 is set within a range in which it succumbs to the torque of the gear shaft 13 as the output shaft, but overcomes the external force (for example, the force generated by the friction caused by the intermediary transfer belt 32) which acts upon the photoconductive drum <u>80</u> ~~21~~. With the provision of the above described structural arrangement, the braking force provided by the powder brake 501 can keep the second coupling portion with the hole 50 with a polygonal cross section, normally in contact with the first coupling portion 10 in the form of a polygonal pillar, without interfering with the normal engagement of the first coupling portion 10 into the hole 50. Therefore, the photoconductive drum 80 is always driven by the driving system properly connected to the photoconductive drum 80.--

Please amend the paragraph starting at page 53, line 21 and ending at page 54, line 25, as follows.

--As described above, in a driving force transmission mechanism, a process unit, and an image forming apparatus, which are in accordance with the present invention, the coupling of the driving force transmission mechanism comprises a female type portion and a male type portion, which are attached to one of the lengthwise ends of the output shaft of the main apparatus of the image forming apparatus, and one of the lengthwise ends of the cylindrical member in the process unit, one for one, and the driving force from the output shaft is transmitted to the cylindrical member through a plurality of interfaces, in the form of a point or a surface, between the female or male type portions. Either the female type portion or male type portion is provided with a shaft which protrudes in the direction of the gear shaft on the image forming apparatus main assembly side, and the other member, that is, the member which is not provided with the protruding shaft, is provided with a mechanism for providing a braking force which works on the wall of the hole of the female type portion and the protruding shaft, in their circumferential directions. Therefore, even if the driven side of the driving force transmission mechanism is subjected to an external force other than the force transmitted from the driving side of the driving force transmission mechanism, the contact between the female and male type portions is kept in the normal state of contact, assuring that the driving force is always satisfactorily transmitted from the driving side to the driven side, minimizing color deviation. Therefore, it is possible to provide a high quality image.--

Please amend the paragraph starting at page 54 line 27 and ending at page 55, line 8, as follows.

--In this embodiment, or the eighth embodiment, of the present invention, a center shaft is put through the driving force transmitting portion, and the braking force is applied to a shaft integral with the center shaft, to provide a stabler driving force transmission mechanism. This structural arrangement is shown in Figure 11, which is a sectional view of a process unit 100 which employs the coupling in this embodiment.--

C42

Please amend the paragraph starting at page 55, line 9 and ending at page 56, line 2, as follows.

--The photoconductive drum 80, with which the process unit 100 removably mountable in the main assembly of an image forming apparatus is provided, is provided with drums flanges 18b and 18d, which are attached to the lengthwise ends of the photoconductive drum 80 one for one. The drum flange 18b is provided with a first coupling portion 10 in the form of a polygonal pillar, which is on the rear side of the apparatus, and to which the driving force is transmitted. The drum flange 18d is on the front side of the apparatus, and to which the driving force is not transmitted. The drum flanges 18b and 18d each are provided with a center hole, through which a drum shaft ~~130a~~ 13a is put. Further, the drum flange 18b is provided with a hole 19, in which the driving shaft 13 on the apparatus main assembly side is put. When the photoconductive drum 80 rotates, the drum shaft 13a ~~130a~~, and drum flanges 18b and 18d, rotate with the photoconductive drum 80. In other words, the photoconductive drum 80 rotates about the axial line of the drum shaft 13a ~~130a~~.--

C43

Please amend the paragraph starting at page 56, line 3 and ending at line 6, as follows.

--The front end of the drum shaft 13a ~~130a~~ is rotationally supported by a bearing 2e, which is fixed to a bearing case 2c. The bearing case 2c is fixed to the frame 59, also called the rotatable aligning plate, of the process unit 100.--

C44

Please amend the paragraph starting at page 56, line 7 and ending at line 27, as follows.

--As the process unit 100 is inserted into the image forming apparatus, the driving shaft 13, which also constitutes the center shaft of the coupling portion on the apparatus main assembly side, is inserted into the hole 19 of the drum flange 18b, enabling the drum shaft 13b ~~130b~~ and center shaft 13 to rotate together, and properly positioning the rotational center of the photoconductive drum 80 relative to the apparatus main assembly. At the same time, the first coupling portion 10, with which the drum flange 18b is provided, engages into the second coupling portion 14 with a hole, on the apparatus main assembly side, enabling the photoconductive drum 80 to be rotationally driven. The first coupling portion 10 is in the form of a triangular pillar, which not only is capable of transmitting the driving force, but also is capable of generating such force that pulls the photoconductive drum 80 toward the apparatus main assembly in terms of the axial direction of the center shaft 13, as the driving force is transmitted to the first coupling portion 10.--

C45

Please amend the paragraph starting at page 57, line 15 and ending at page 58, line 19, as follows.

--On the other hand, the drum flange 18d on the non-driven side, fixed to the front side of the photoconductive drum 80, is provided with a recess, the bottom portion of which is provided

C46

with a rib ~~2d1~~. Further, on the non-driven side, there is a torque limiter 2h, as a load generating means, for applying a predetermined amount of load to the drum shaft ~~130a~~ 13a in the circumferential direction of the photoconductive drum. The torque limiter 2h is fixed to the flange 18d on the non-driven side, by pressing one end of the torque limiter 2h into the rib ~~2d1~~. To the other end, that is, the one on the non-driven side, of the torque limiter 2h, a thrust applying member 2i as a means for generating pressure in the axial direction the drum shaft 13a ~~130a~~ is fixed. The thrust applying member 2i is provided with a tapered portion ~~2i1~~ comprising ribs positioned equal distances from, and symmetrically with respect to, the axial line of the drum shaft 13a ~~130a~~. With the provision of the above described structural arrangement, a predetermined amount of load is applied to the drum shaft 13a ~~130a~~ in the circumferential direction of the photoconductive drum 80 by the torque limiter 2h fixed to the drum flange 18d. Therefore, even if the process unit 100 is subject to an external force other than the driving force from the apparatus main assembly, the two sides of the coupling of the driving force transmitting portion are kept in the normal state of contact, being enabled to satisfactorily ~~transmitting~~ transmit the driving force, and therefore, minimizing color deviation. As a result, a high quality image can be obtained.--

C46 Cont